

DART AEROSPACE LTD	Work Order:	24149
Description: Wearshoe	Part Number:	D2746
Drawing: D2746 Rev. B	Qty:	50
		Page 1 of 1

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveller Dwg not required	U	05-09-02	50
2	PG	Issue P/O: 2005582 Email or ship DXF file to vendor Laser Cut per Dwg D2746 flat pattern D2746. Material release note required	U	05-09-02	50
3	RG	Receive and Inspect for transit damage Ensure the material note is attached	CD	05-09-20	50
4	QC6	Inspect dimensions per template D2746T1		05-11-15	
5	GB	Deburr if necessary	N/A		
6	GB	Form on CNC Brake as per Dwg D2746 using Jigs DT8261 and DT8326	DB	05/14/15	49
7	GB	Form joggle on Punch as per Dwg D2746 using Jig DT8158 Identify as D2746	SB	05/14/18	49
8	QC5	Inspect work to Step 7		05-12-01	49
9	FP	Powder Coat Grey RAL-7012 (Ref. 4.3.5.5) per QSI 005 4.3	FC	05-12-20	49
10	QC3	Inspect Powder Coat	MM	06-01-16	49
11	FP	Identify and Stock	MM	06-01-16	49
12	AC	Cost / part:	SAC	06-01-17	49
	DC	Close W/O Inspect Level 21	D	06/01/17	49

	Date	Change	Revised By	Approved
A	98.09.10	New Issue	DS/CP	
B	99.02.24	Added Qty Column, Jigs	DM	
C	00.11.01	Removed P/O for Powder Coat – in house process	EC	
D	02.10.24	Re-format	KJ RF	dh

RELEASED
02/10/2013 RF

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector
05/11/15	4	TOOK 1 for new template to inspect to Rev.C. dims are the same but the holes are now square instead of oval.	✓	05/11/15	1	✓	✓ 05/11/15

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____

PAR #: _____

NCR: Yes No DQA: 

Date: 06/01/17

NOTE: Date & initial all entries

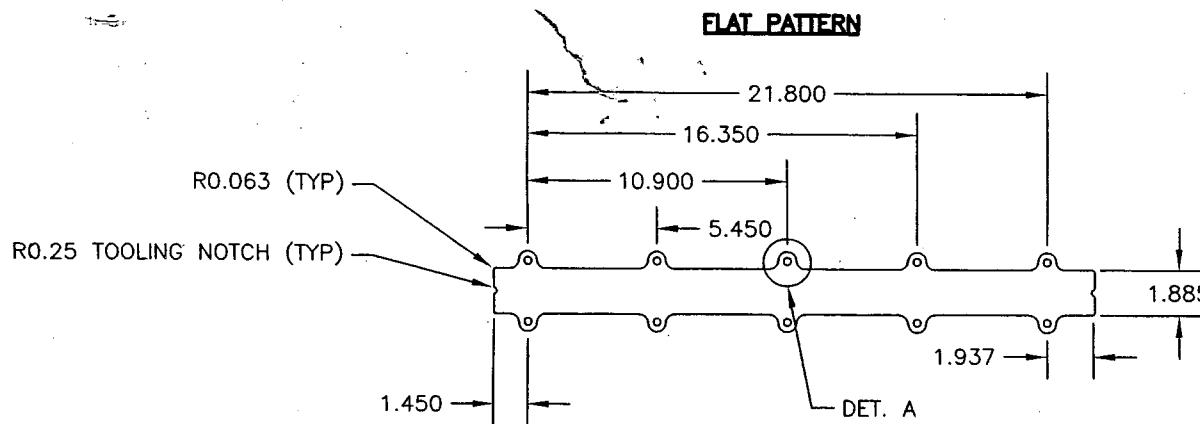
QA: N/C Closed: _____

Date: _____

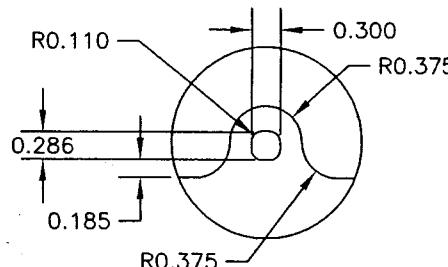
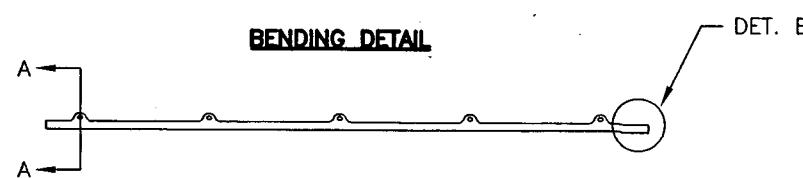
PRELIMINARY ISSUE

DART

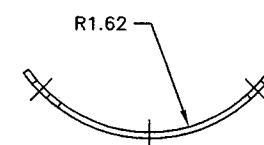
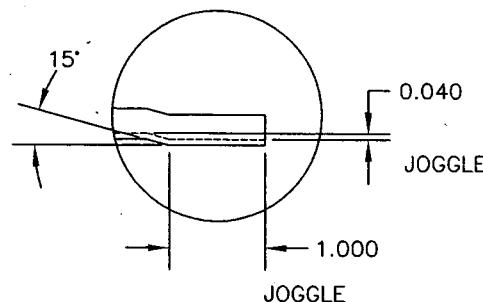
DESIGN	DRAWN BY	DART AEROSPACE USA, INC.
CHECKED	APPROVED	PORT HADLOCK, WA
DATE		DRAWING NO.
05.08.17		D2746
		TITLE
		WEARSHOE
		SCALE
		1:8
		REV. C
		SHEET 1 OF 1



BENDING DETAIL



DETAIL A



NOTES

MATERIAL: AISI 1010-1025 OR ASTM A36/A366 SERIES STEEL
20 GAUGE (0.040 THICK)

FINISH: POWDER COAT GREY (REF. 4.3.5.5) PER DART QSI 005 4.3
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

NOTE: THIS PART CAN BE MADE BY MODIFYING D2656-21

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Sep 01, 2005
10:48 am

Work Order No : 0024149
 Project Name : D2746
 Project For : WK537
 Work Order Type : Main
 Main WO Number :
 House Part Number : D2746
 Description : Wearshoe
 Manufactured : Yes
 Amount Req'd : 50
 Amount Done : 0
 Start Date : 08-29-05
 Est Finish Date : 09-16-05
 Act Finish Date :
 Drawings Reqd : No
 Ok for Approval :
 Approval Rec'd : \$0 Posted to Finished Goods

Department Code:
 Burden Flags : NNNNNNN
 WO Status : Open
 Invoice State : Not Invoiced
 Invoice Date :
 Invoice Number :
 Invoice Amount : 0.00

Order Entry No :
 OE Value : 0.00

Est Mark Up : 0.000%
 Actual Mark Up : 0.000%

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
<hr/>					
Burden :	0.00	0.00	0.00		
<hr/>					
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00



New Zealand Steel Limited
Glenbrook, South Auckland
Postal: Private Bag 92121, Auckland, New Zealand
Telephones: (09) 375 8999 / 375 8111 Auckland
(09) 235 8089 / 235 3535 Waikato
Fax: (09) 375 8959

TEST CERTIFICATE

Ref: 5005/21329

CUSTOMER	Wilkinson	P41007DI002												SPECIFICATION ASTMA1008 CS Type A					CERTIFICATE No TC107796						
CUSTOMER O/N	90-21N-288													PRODUCT CRA WIDE COIL					PAGE 1 of 1						
MILL O/N	453665													DIMENSIONS 0.033" x 48" x Coil					DATE 31 March 2005						
PACK NUMBER	HEAT NO	CHEMICAL COMPOSITION PERCENT												MECHANICAL TESTS (TEST SPECIFICATION - ASTMA370)											
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	Al	B	N2	CE()	180°	BEND	YIELD	T.S.	%ELONG	HARDNESS	r	LENGTH (feet)
		x100				x1000								x10000		x100									
R9-455932-00	640077	5	TR	20	10	16	14	17	18	1	6	1	1					Good				41		2621	
R9-455933-00	640077	5	TR	20	10	16	14	17	18	1	6	1	1					Good				41		2723	
R9-455934-00	640077	5	TR	20	10	16	14	17	18	1	6	1	1					Good				50		2546	
R9-455935-00	640077	5	TR	20	10	16	14	17	18	1	6	1	1					Good				50		2789	

YIELD (A)=0.2% PROOF STRESS (B)=LOWER YIELD STRESS	GAUGE LENGTH (G.L.) (A)=200mm (C)=80mm (E)=2" (B)=50mm (D)=5.65 So (F)=8"	PLASTIC STRAIN RATIO (r) (A)=r0 (C)=r45 (B)=r90 (D)=(r0+r90+2r45)/4	IMPACT TEST (A)=10mm x 10mm (D)=2.5mm x 10mm (B)=7.5mm x 10mm (E)=5mm x 10mm	(C)=5mm x 5mm (D)=5mm x 10mm	CARBON EQUIVALENT VALUE (CE) (A)=C+Mn/6 (B)=C+Mn/6+(Cr+V+Mo)/5+(Cu+Ni)/15 (C)=C+Mn/6+Si/24 (D)=
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WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN TESTED AND INSPECTED
WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION

APPROVED *Amrit Singh Misra*
QC METALLURGIST

20 GA CRM_s



Date: Thursday, 11/17/2005 12:09:55 PM
 User: Linda Lacelle

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services			Drawing Name	: WEARSHOE		
Job Number	: 24149			Part Number	: D2746		
Estimate Number	: 10330			Drawing Number	: D2746 REV B		
P.O. Number	:			Project Number	:		
This Issue	: 11/17/2005 S.O. No. :			Drawing Revision	: B		
Prsht Rev.	: NC			Material	:		
First Issue	: / / Type : PURCHASED PARTS			Due Date	: 11/24/2005 Qty: 50 Um: Each		
Previous Run	:						
Written By	:						
Checked & Approved By	:						
Comment	: Est: D 02.10.24 Re-format KJ						

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	PG	PURCHASING 
Comment: PURCHASING Issue P/O: _____ Email or ship DXF file to vendor Laser Cut per Dwg D2746 flat pattern D2746. Material release note required		
2.0	D2746F	Wearshoe
3.0	PACKAGING 1	PACKAGING RESOURCE #1 
Comment: PACKAGING RESOURCE #1 Receive & Inspect For Transit Damage Ensure material release note is attached		
4.0	QC6	DIMENSIONAL CHECK 
Comment: DIMENSIONAL CHECK Inspect dimensions per template D2746T1		
5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1 
Comment: SMALL & MEDIUM FAB RESOURCE 1 Deburr if necessary.		
6.0	BRAKE NC	NC BRAKE 
Comment: NC BRAKE 1-Form on CNC Brake as per Dwg D2746 using Jigs DT8261and DT8326 2-Form joggle on Punch as per Dwg D2746 using Jig DT8158Identify as D2746		

Date: Thursday, 11/17/2005 12:09:55 PM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: WEARSHOE

Job Number: 24149

Part Number: D2746

Job Number:



Seq. #: Machine Or Operation:

Description :

7.0 QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8.0 POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

9.0 QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

10.0 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

11.0 DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Job Completion



Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Nov 08, 2005
11:05 am

Work Order No : 0024149
 Project Name : D2746
 Project For : WK537
 Work Order Type : Main
 Main WO Number :
 House Part Number : D2746
 Description : Wearshoe
 Manufactured : Yes
 Amount Req'd : 50
 Amount Done : 0
 Start Date : 08-29-05
 Est Finish Date : 09-16-05
 Act Finish Date :
 Drawings Reqd : No
 Ok for Approval :
 Approval Rec'd :

Department Code:
 Burden Flags : NNNNNNN
 WO Status : Open
 Invoice State : Not Invoiced
 Invoice Date :
 Invoice Number :
 Invoice Amount : 0.00
 Order Entry No :
 OE Value : 0.00
 Est Margin : 0.000%
 Actual Margin : 0.000%
 \$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	357.50	100.00	0.00	357.50
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
=====					
Burden :	0.00	0.00	0.00		
=====					
Total Cost :	0.00	357.50	100.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	357.50			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/ (Loss)	0.00	(-357.50)